

Effect of different concentrations of chitosan coating on storage life and quality characteristics of Papaya (*Carica Papaya L.*)

ABSTRACT

Mature green stage of papaya fruits were treated with different concentrations of chitosan at 0, 0.5, 0.75 and 1%, and stored at 13 ± 1 °C for 28 days to study the effect of these concentrations on the storage life and maintaining quality of papaya. Chitosan concentrations 0.75 and 1% showed the best control effect on decay compared with 0% (Control) and 0.5%. At 0.75 and 1% of chitosan, flesh firmness maintained resulted in prolonging in storage life of 28 and 26 days compared with 21 and 19 days, respectively for 0.5 and 0%. Furthermore, they were significantly decreased the weight loss of fruit. All of the treatments inhibited increase of soluble solid contents and pH values of pulp fruits after 21 days of storage at 13 ± 1 °C. Titratable acidity and ascorbic acid were higher for coated fruits (0.5, 0.75 and 1%) compared with uncoated fruits. Concern treatments of chitosan at 0.75 and 1% improve papaya fruit quality and resistance to decay.

Keyword: Chitosan; Papaya; Postharvest; Quality; Storage life